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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,471	06/23/2003	Jeffry Arnold LeBlanc	STL 3244	2653
36521 7590 04/19/2007 MOSER, PATTERSON & SHERIDAN LLP/ SEAGATE TECHNOLOGY LLC 595 SHREWSBURY AVENUE SUITE 100 SHREWSBURY, NJ 07702			EXAMINER KRAUSE, JUSTIN MITCHELL	
			ART UNIT 3682	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/602,471

Applicant(s)

LEBLANC ET AL.

Examiner

Justin Krause

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 6-8,10,11,15 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9,12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "step opposite a portion of the at least one set of fluid dynamic grooves" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1-5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakatani et al. (US Patent 5,046,863).

Sakatani discloses a fluid dynamic bearing system comprising:

- A stationary sleeve (12)
- A rotating shaft (13) axially disposed through the sleeve
- A journal gap between the shaft and the sleeve, defined by first and second interfacial surfaces of the shaft and sleeve (see Fig 1)
- At least one set of fluid dynamic grooves (15) formed on the first interfacial surface of the journal gap
- At least one step (12) defined on the second interfacial surface of the journal gap and opposite a portion of the at least one set of fluid dynamic grooves, wherein the at least one step reduces the journal gap in a localized region and at least partially aligned with a portion of the at least one set of fluid dynamic grooves.

Regarding claim 2, the step opposes a portion of the at least one set of grooves across the journal gap.

Regarding claim 3, the fluid dynamic grooves are asymmetric (15A,15B)

Regarding claim 4, the at least one step comprises a circumferential raised surface on the second interfacial surface.

Regarding claim 5, the at least one step is opposite and offset axially from the at least one set of fluid dynamic grooves.

Regarding claim 9, the first interfacial surface of the gap comprises the inner diameter of the sleeve and the second surface comprises the outer diameter of the shaft.

Claims 12-14, are rejected under 35 U.S.C. 102(b) as being anticipated by Moritan et al (US Patent 5,715,116).

Moritan discloses a fluid dynamic bearing motor comprising:

- A stationary sleeve (21)
- A shaft and hub rotatable in relation to the sleeve (12 and 11)
- A dynamic thrust bearing defined adjacent an end of the shaft (12b and 22)
- A journal defined between the sleeve and the shaft (see Fig 1c, the area defined between 12 and 21)
- A fluid bearing means between the sleeve and the shaft (Col. 7, lines 43-46)
- A pressure regulating means (profile in sleeve 21, see fig. 1b) cooperating with and opposing the bearing means across the journal therefrom to maintain proper axial alignment of the shaft and hub with the sleeve.

Regarding claim 13, the fluid bearing means comprises at least one set of fluid dynamic grooves (12a) formed on a first surface defining the journal and fluid in the journal (Col 7, lines 43-46).

Regarding claim 14, the regulating means comprises at least one step (profile in sleeve 21) formed in the second surface defining the journal and is disposed at least in part across the journal from at least one set of fluid dynamic grooves.

Response to Arguments

Applicant's arguments filed February 6, 2007 have been fully considered but they are not persuasive.

Applicant argues that Sakatani does not disclose a fluid dynamic bearing with a step opposite a portion of the fluid dynamic grooves. The examiner disagrees, finding that a change in the sleeve profile constitutes a "step" and the step is opposite the fluid dynamic grooves. Further, applicant's claimed limitation is inconsistent with the elected embodiment, which itself fails to satisfy the limitation. The step in figure 3 is not opposite any fluid dynamic grooves on the shaft.

Regarding claim 12, Moritan contains a thrust bearing, (see Col 3, lines 36-41) and further discloses the known use of grooves for generating thrust force (col 1, lines 59-61).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

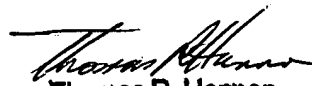
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMK
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Thomas R. Harmon
Primary Examiner